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TRADE AND ENVIRONMENT RELATING TO FOREST GOODS AND SERVICES

Programme element IV

Report of the Secretary-General

SUMMARY

The present report, prepared in response to a request of the Intergovernmental Panel on Forests at its second session, discusses how the linkages between international trade in forest products and sustainable forest management are affected by market access and trade barriers to forest products; certification and labelling in promoting sustainable forest management; full cost internalization of environmental impacts; market transparency for forest products; promotion of less used species; and financing and technology for value-added downstream processing.

International market access will be a key factor in determining the long-term success of a global policy to encourage sustainable forest management through trade. The Uruguay Round Agreement has achieved reductions in most tariff barriers for forest products, and perhaps more importantly, has reduced uncertainty by binding tariffs in major importing markets and reducing the degree of tariff escalation. In addition, some progress has been made in curtailing certain important non-tariff barriers and other measures which affected the trade in forest products in the past.

Competition between different wood products, products from different regions of origin, and wood and non-wood substitutes is inevitable. The available evidence suggests that such competition should not unduly constrain a global initiative to improve sustainable forest management.

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For promoting sustainable forest management globally, the development of an internationally agreed and voluntary system of certification for boreal, temperate and tropical forest products has been proposed. It is important, however, for the current focus on certification to be put in perspective. To date, only a tiny proportion of the global trade in forest products and a small area of the world's forests are influenced by certification, and the impact is not likely to increase significantly in the foreseeable future.

The transition to sustainable forest management is likely to impose significant costs on timber operations and forestry industries in both temperate and tropical regions. The overall economic impact may be less than initially feared. The burden may be greater for tropical countries since they are likely to face higher production and harvesting costs than boreal and temperate countries. It may no longer be economically worthwhile to harvest certain forests, and if that becomes the case on a large scale, significant portions of the forest resource base of certain countries may have to be taken out of production. The likely result would be some loss in forestry income and export earnings.

Without greater market transparency, progress in all of the areas discussed in the report is likely to be hampered. Current efforts to improve market transparency, however, are very limited.

There is considerable scope for the international institutions that address the issues of trade and environment in relation to forest products to collaborate, coordinate their activities and jointly identify additional areas for further work. It is suggested that they form an ad hoc working group to address the proposals in the report for action on improving trade-related incentives for encouraging sustainable forest management globally.

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INTRODUCTION

1. Programme element IV of the work programme of Ad Hoc Intergovernmental Panel on Forests (IPF) is concerned with trade and environment relating to forest products and services. As defined by the Commission on Sustainable Development, the broad aim of the programme element is to "examine relevant factors affecting trade in forest products and other forest-and-trade issues in an integrated and holistic approach that promotes a supportive relationship between trade and environment". 1/

2. At its first session, IPF defined the mandate of programme element IV (E/CN.17/IPF/1995/3) and at its second session, endorsed the mandate (E/CN.17/IPF/1996/11). It also agreed that substantive discussion at its third session should focus on how the linkages between international trade in forest products and sustainable forest management are affected by market access and trade barriers to forest products; certification and labelling in promoting sustainable forest management; full-cost internalization of environmental impacts; market transparency for forest products; promotion of less used species; and financing and technology for value-added downstream processing.

3. The present report takes into consideration paragraphs 14 and 15 of the Forest Principles 2/ and paragraph 11 of the Statement on Biological Diversity and Forests from the Convention on Biological Diversity to the Intergovernmental Panel on Forests (UNEP/CBD/COP/2/19).

4. The report was prepared by the International Tropical Timber Organization (ITTO), as the lead agency for programme element IV, in consultation with the secretariat of the Intergovernmental Panel on Forests in the Division for Sustainable Policy Coordination and Sustainable Development of the United Nations Secretariat. The report benefited from several meetings, conferences and studies - in particular, the International Conference on Certification and Labelling (Brisbane, 26-30 March 1996), sponsored by the Government of Australia; a Norwegian-sponsored study on long-term trends and prospects in the supply of and demand for timber and implications for sustainable forests, carried out by the European Forest Institute; and the International Experts Working Group Meeting on Trade, Labelling of Forest Products and Certification of Sustainable Forest Management (Bonn, 12-16 August 1996).

Scope of analysis and general considerations

5. The linkages between environmental considerations and trade in forest products and services will be assessed below mainly in terms of wood products - roundwood, sawnwood, plywood, furniture and pulp and paper products. Non-wood forest products, such as rattans, wildlife products and medicinal plants, are not covered because of their relatively small contribution in terms of volume and value to international trade and the scarcity of trade statistics on them. There is also a lack of statistical information on the key cross-border ecological services and amenities supported by forests, such as eco-tourism, watershed management, carbon sequestration and biochemical prospecting. Nevertheless, to the extent that the sustainable management of forests affects

trade in wood products, it will also affect the availability and quality of non-wood forest products and forest services. Where appropriate, the linkage will be examined explicitly.

6. Although the production of charcoal and fuelwood is significant as a percentage of the volume of total roundwood production, especially in developing countries (i.e., 55 per cent), only a very small percentage (less than 0.3 per cent) of non-industrial roundwood production enters international trade. The value of imports of fuelwood and charcoal compared to the value of imports of all timber products is also very small - less than 0.2 per cent. For these reasons, and because it rarely qualifies as a traded good, owing to its low value per unit of volume, fuelwood is excluded from further consideration in this document.

7. Most available information on international trade in wood products has been assembled by the Food and Agriculture Organization of the United Nations (FAO), and that source will be used primarily in the present report. Following FAO convention, wood and/or timber products will be referred to as "forest products" generally.

I. TRENDS IN TRADE IN FOREST PRODUCTS

A. Global trade

8. Global trade in forest products has been expanded throughout the past few decades. The volume of industrial roundwood produced grew steadily, to 1,600-1,700 million m^3 in the early 1990s, of which around 6-7 per cent entered international trade. In contrast, just under 20 per cent of wood pulp and around 20-25 per cent of sawnwood, wood-based panels and paper and paper board are traded internationally. Although the proportion of wood pulp that is traded has remained fairly constant since the 1960s, the share of sawnwood and wood-based panels that are traded has doubled (from 11.8 to 22.8 per cent and from 12.0 to 25.5 per cent respectively). The proportion of paper products that is traded has also gone up substantially, from 16.5 to 24.9 per cent.

9. While the value of industrial roundwood imports has been rising steadily over time, the share of logs in total trade in forest products has nearly halved, from a peak of around 20 per cent in the 1970s to 10-12 per cent in the early 1990s. The shares of wood pulp and sawnwood in global trade in forest products has also declined steadily since the early 1960s, from 19.4 to 11.3 per cent and 27.2 per cent to 21.4 per cent, respectively. In contrast, over that period the share of wood-based panels doubled, from 6.4 to 12.3 per cent, and the share of paper and paper board increased, from 33.1 to 42.6 per cent. These trends reflect the increasing importance of higher valued forest products in global trade.

B. Price trends

10. Although prices of forest products have risen steadily, the real forest-product price index has been fairly stable since the 1960s. The index fell

gradually in the early 1980s but has been increasing since 1985. Within the broad forest products category, the real price of tropical logs has followed a rising trend since the early 1970s; prices briefly declined between 1979 and 1985, only to pick up again thereafter. The real price of tropical sawnwood has followed a similar trend, although with larger fluctuations and a steeper decline in the mid-1980s and a more rapid rise recently. The real prices of other industrial timber products, including wood-based panels, pulp, and paper and paper board, sustained that rise throughout the 1980s. The real price increases may reflect increasing product scarcity owing to declining forest inventories and increasing demand for tropical timber products, whereas the recent downturn in certain real prices may reflect the depressed state of the global economy during the late 1970s and early 1980s.

C. Regional trade

11. The pattern and direction of trade suggests that the global market in forest products is still largely dominated by developed countries, in terms of both exports and imports. Nevertheless, two distinct trends are also discernible. First, the trade is highly regionalized within three important trading blocs - the Pacific Rim, North America, and Europe (mainly Western Europe). Within each trading bloc the major importers are mainly developed countries, such as Japan, the United States, Canada and the European Union. However, in recent years developing countries, particularly in Asia, have been increasing their share of global imports. Much of the demand reflects increased growth in the consumption of industrial wood products in developing countries. Newly industrialized countries with limited forest resources have also been increasing their imports of logs and semi-finished wood products as raw materials for export-oriented processing industries.

12. Secondly, the major global exporters of forest products still tend to be developed countries with boreal and temperate forest resources and processing industries. However, developing countries such as Indonesia and Malaysia have emerged as dominant world exporters of certain forest products, such as non-coniferous wood-based panels, logs and sawnwood. Other developing countries, notably Brazil, Chile and the newly industrialized Asian countries, are beginning to have an impact on international trade in wood pulp and paper products. In general, the trade in forest products has shifted towards value-added processed products.

D. Future trends in supply and demand

13. A number of recent studies have attempted to forecast future trends in supply and demand in the forest sector on a global and regional level. 3/ The studies confirm the increasing dominance of value-added products and continuing shifts in the pattern and direction of trade, particularly for tropical products. As boreal and temperate countries look more to their own forest resources to meet their needs, as North/North trade continues to expand, and as domestic consumption in tropical producer countries grows, the international trade in tropical timber products is likely to decline in relative importance. While the total volume of the tropical timber trade may decline, producer

countries may export a higher proportion of value-added wood products, and thus any decline in the value of the trade may be less significant. In addition, an increase in South/South trade - particularly in sawnwood - will be a counteracting force. Asia will continue to be the dominant producer and exporter of tropical timber, although with proportionately fewer exports of logs and more of value-added timber products. As a result of Asian producers moving into downstream markets, Africa and Latin America may become relatively more important exporters of logs and sawnwood, respectively. However, changes in technology and preferences will favour growth in the world consumption of pulp and paper products as opposed to that of roundwood and sawnwood.

14. Recent short- and long-term projections of the trade in forest products, conducted by the Centre for International Trade in Forest Products (CINTRAFOR), the European Forest Institute and others, confirm the increasing importance of developing countries as both exporters and importers of value-added forest products. Although there may be an increasing scarcity of tropical hardwood resources, particularly given current rates of exploitation and consumption in South-east Asia, temperate and boreal resources, secondary forests and plantations, and new tropical hardwood resources in Latin America and Africa are expected to meet any global shortfalls in supply. The extent to which the scarcity of tropical hardwood resources may become a constraint on processing activities, as reflected in increased real prices for tropical logs and sawnwood, will depend on the willingness of major developing country producers to pursue sustainable management of remaining old-growth production forests and coordinate processing capacity with supply.

E. Status of global forest resources

15. From the standpoint of environmental services, closed forest resources are the most important. In tropical countries they have been subject to a higher rate of deforestation than in temperate and boreal countries. Reforestation is generally higher in temperate and boreal countries as well. This changing pattern of forest resources is thought to have two important implications for trade in forest products:

(a) Declining tropical resources and expanding temperate resources will offset each other, leading to stable prices for wood products generally, except for highly valued tropical woods;

(b) The shift to plantations and second-growth forests versus old-growth stands as the source of timber will continue. The long-term pattern will shift from the Pacific northwest of the United States and the tropics to plantation forests in North America and newly planted southern hemisphere forests. European forest resources are also projected to expand, at a net rate of around 1 per cent annually.

II. MARKET ACCESS AND TRADE BARRIERS

A. Trade barriers before the Uruguay Round

16. Since the Second World War, trade in forest products has generally benefited from the General Agreement on Tariffs and Trade (GATT). Tariff barriers have continued to decline in recent years, particularly since the post-Tokyo Round. The extent of the decline differs with the market and product. With few exceptions, the tariff rates in developed country markets had fallen generally to very low levels even before the schedules of the Uruguay Round were agreed.

17. However, tariff escalation - the extent to which tariff levels rise with the level of value-added processing of a forest product - has continued in most developed countries, with specific processed products such as wood-based panels, joinery, coated and corrugated paper, kraft paper, and furniture generally receiving relatively higher rates. Tariff rates have consistently been higher - often substantially - in developing country markets then in developed country markets. Some developing countries have preferred a high uniform rate applied across all forest products.

18. One important impact of the decline in tariff rates for forest products in developed country markets is that the tariff differential between most favoured nation (MFN) and generalized system of preferences (GSP) rates have been reduced significantly. Most tariff reductions have led to a general decline in the MFN rate, while the GSP rate (often 0) has been left largely unchanged. This suggests that exporters facing the full MFN rates for certain forest products may have gained more from falling tariff rates than developing countries that previously benefited from the GSP and other preferential schemes.

19. The most common non-tariff measures applied to trade in forest products over recent decades have been quantitative restrictions and/or quality controls that have targeted specific products, wood species and even individual exporters. However, a diverse range of non-tariff measures has been employed, and their use was both prominent and increasing for some products in the period leading up to the conclusion of the Uruguay Round.

B. Implications of the Uruguay Round

20. The Uruguay Round Agreement, formally signed in Marrakesh in April 1994, has a number of important implications for trade in forest products. Tariff elimination on pulp and paper items was agreed to by Canada, the European Union, Japan, the United States and several other major importers, including Finland, the Republic of Korea and New Zealand. The major developed country importers are also committed to reducing tariffs by 50 per cent on solid wood products on an average trade-weighted basis over a five-year period starting in 1995. In the case of furniture, some major importers such as the European Union, Japan and the United States have agreed to eliminate tariffs completely over the next 8-10 years. Most other countries have also agreed to reduce tariffs for solid

wood products and furniture or at least to declare bound rates. Many other countries are also reducing tariffs on forest product imports significantly.

21. Although tariffs were not eliminated on all forest products, the average rate of Uruguay Round tariff reductions for forest products in the import markets of developed countries compares favourably with that of other industrial goods. On a trade-weighted basis, forest products will have the highest percentage of all imports (85 per cent) without duty in developed country import markets - almost double the proportion of imports of all other industrial goods that have zero tariffs (see the table). Tariffs will be significant mainly on wood-based panels. A second major contribution of the Uruguay Round has been to reduce further the degree of tariff escalation faced by forest products in developed country markets.

Table. Changes in tariff escalation of selected forest products in developed countries

Product category by stage of processing	Pre-Uruguay Round (percentage)	Post-Uruguay Round (percentage)	Reduction (percentage)	Change in tariff escalation
Wood				
In the rough (logs)	0.0	0.0	0	..
Wood-based panels	9.4	6.5	31	-30
Semi-manufactures	0.9	0.4	50	-50
Wood articles	4.7	1.6	67	-67
Subtotal	2.0	1.1	43	..
Paper				
Pulp and waste	0	0	0	..
Paper and paper board	5.3	0	100	-30
Printed matter	1.7	0.3	83	-50
Paper articles	7.3	0	100	-67
Subtotal	3.5	0	99	..

Source: GATT, The Results of the Uruguay Round of Multilateral Trade Negotiations. Market Access for Goods and Services (Geneva, 1994).

Note: Tariffs are based on weighted averages on imports from all sources. Tariff escalation is defined as "the tariff wedge between processed and unprocessed, or raw, products".

22. The implications of the Uruguay Round for the non-tariff barriers increasingly faced by forest products are less clear. However, two special agreements, the Agreement on the Application of Sanitary and Phytosanitary (SPS) Measures and the Agreement on Technical Barriers to Trade (TBT), do provide the basis for tackling certain non-tariff measures that have been used as trade barriers against forest products. The SPS agreement could reduce the use of inspection, quarantine and treatment of imported forest products as prohibitive measures beyond what is necessary to protect domestic human, animal and plant populations from pests or diseases. The TBT agreement could limit the use of technical regulations on forest products as non-tariff restrictions rather than as legitimate means of protecting human health and safety, preventing environmental degradation and ensuring adequate product quality and design standards.

23. Other provisions of the Uruguay Round that may help to reduce barriers to trade in forest products include limitations and clarifications on the use of anti-dumping and countervailing duties, customs valuation and licensing procedures, and market access restrictions. A possible indirect impact of the Uruguay Round is that it may have prompted other long-standing non-tariff barriers in individual markets to be lessened. For example, the European Union has recently proposed eliminating for 1995/96 its plywood tariff/quota scheme for beneficiaries of the Generalized System of Preferences.

24. A recent analysis of the likely impacts of the Uruguay Round tariff reductions on trade in forest products for selected products and markets indicates that the total trade effects on selected forest products may range from US$ 340 million to US$ 472 million in key developed and developing country markets. However, these impacts amount to only 0.4 per cent of total 1991 imports of forest products in the markets analysed, which had an aggregate value of $85.6 billion. This suggests that, although the real trade gains from the tariff changes are positive and significant, they may not have a substantial impact on global trade. One factor limiting the gains from the Uruguay Round for forest products is that the pre-Uruguay tariff rates for most of the products in major importing markets were already very low.

25. Now that the Uruguay Round has led to international commitments to reduce forest product tariff rates significantly in major markets, it is unlikely that tariff rates will be increased unilaterally. The new and often lower rates in developed country markets will be bound, as will an increasing proportion of tariffs in developing country markets. (Binding a tariff means that a country has agreed officially to a ceiling on the tariff rate.)

C. New barriers to trade

26. In recent years there has been a proliferation of additional policies and regulations that have the potential of becoming new barriers to trade in forest products. Those barriers include:

(a) Export restrictions by developing countries to encourage domestic processing of tropical timber for export;

(b) Environmental and trade restrictions on production and exports in developed countries which affect international trade patterns;

(c) Quantitative restrictions on imports of "unsustainably produced" timber products;

(d) The use of eco-labelling and "green" certification as import barriers.

27. Although only the last two measures could be strictly defined as "new", all of these trade measures have been increasingly employed in recent years and have the potential to affect trade flows in forest products significantly.

28. Developing countries are continuing to use export restrictions on wood in rough and semi-processed products to support domestic processing industries and improve export prospects for more highly valued forest products. The general conclusion is that timber export taxes and bans have proved only moderately successful in achieving the desired results in South-east Asia, and in many cases they were achieved at high economic cost, in terms of both the direct costs of subsidization and the additional costs of wasteful and inefficient processing operations.

29. Despite the losses in terms of economic inefficiencies, many log-producing countries see the use of export taxes and bans as the means to compensate domestic processing industries for import barriers faced in developed economy markets. However, with the post-Uruguay Round decline in tariff escalation and barriers generally in import markets for forest products, this argument is less valid.

30. Developed countries are increasingly employing a variety of environmental regulations in their forest industries - both alone and in conjunction with export restrictions - which may have significant trade implications. Whether or not such regulations are being used intentionally for this purpose, they may lead to trade distortions and discrimination. For example, the combination of trade and environmental restrictions on logging in the Pacific North-west of the United States - such as the spotted owl reservations and the state-level logging bans - had significant domestic and global trade impacts, including increases in global sawlog prices and regional shifts in production, with related effects in major sawnwood and plywood markets.

31. In many developed countries domestic policies to promote waste paper recovery and recycling have had important trade implications, particularly where they involve mandatory restrictions on the levels of virgin fibre and pulp use. The trade implications for Canada - the world's largest producer and exporter of newsprint - of United States state and federal recycled content laws for newsprint is an example of this issue. In particular, the United States recycled-content laws may provide an unfair cost advantage to domestic producers because of the greater availability of used newsprint in the United States than in Canada. Similar problems apply to packaging and reuse requirements, such as the recent European Union packaging directive and Japan's regulations for recycling of paper, logging residues and dismantled houses. Such regulations all have the potential of being used as non-tariff barriers to competing paper product imports, particularly if there are requirements on suppliers to recover

packaging or to impose deposit and refund schemes. Potential problems exist with other environmentally oriented regulations, such as the increasing restrictions on trade in wood panels using formaldehyde glue, regulations banning or controlling certain timber preservation processes and materials, and controls on processing materials - e.g., the use of chlorine in bleaching pulp.

32. In most cases, the lack of international consensus and agreement on environmental criteria and standards lies at the heart of disputes as to whether unilaterally imposed measures are restricting market access. For example, Brazilian manufacturers and exporters of pulp have expressed their concern that the criteria developed by Denmark would largely benefit European paper producers at the expense of foreign exporters of pulp and paper products.

33. Many developed countries are also under pressure to adopt quantitative restrictions to limit the import of "unsustainably" produced forest products or to impose countervailing duties on imported products that benefit from an "environmental" export subsidy - i.e., unsustainable forest management that leads to lower harvesting costs and thus lower export product prices. The arguments against imposing unilateral sanctions, such as singling out tropical timber products for trade bans or other restrictions on environmental grounds, are fairly formidable and now generally accepted. However, the establishment of the Trade and Environment Committee of the World Trade Organization (WTO) has shifted the debate over environmental restrictions on trade to the multilateral arena.

34. Although the rationale behind WTO's work programme on trade and environment is to link the benefits of trade liberalization more directly to policies to achieve better environmental protection and sustainable development, the popular perception is that the real objective should be "greening" the GATT/WTO - i.e., subjugating trade rules to environmental criteria. This in turn has led to repeated calls to amend GATT/WTO rules to allow for quantitative restrictions and countervailing duties where there are environmental justifications for employing these measures. If such a broadening of the GATT/WTO rules is achieved, then the use of quantitative restrictions and even countervailing duties by importing countries - e.g., to restrict imports of timber products that are not sustainably produced or to counter perceived environmental export subsidies - will increasingly become a feature of trade in forest products.

35. Although there are legitimate uses of all the trade policy measures discussed above, the rate at which they are being implemented and the frequency with which they have led to trade distortion and discrimination suggests that their use must be examined carefully. International agreements and rules governing their use should also be negotiated, and the interface and possible conflicts between multilateral environmental agreements and trade rules need to be explored through the auspices of WTO. What clearly needs to be avoided is indiscriminate and widespread application of new barriers to trade in forest products which could easily override the gains in market access resulting from the recently concluded Uruguay Round.

D. Relative competitiveness

36. In addition to trade barriers, the degree to which forest products from different regions compete among themselves and with non-wood substitutes for import markets is an important determinant to the long-run returns to forest products. Changes in long-run returns may, in turn, influence the incentives for sustainable forest management.

37. The degree of substitution between tropical and temperate products in consumer markets illustrates the extent to which the markets for these two types of products are interrelated and whether there are essentially two different markets for two distinct commodities. The available evidence indicates that the elasticities of substitution between temperate, boreal and tropical wood products are very low. This suggests that there are two distinct markets, and tropical producers of these products would have difficulty in penetrating the larger temperate market. That is, temperate and boreal softwoods from different regions are still closer substitutes for one another than tropical hardwoods, and vice versa. In general, substitution by origin for tropical sawnwood and plywood in certain importing countries appears to be very high, especially for plywood. There is also evidence that in some major processing markets, imports of tropical logs are subject to substitution by domestic softwood logs and by technical change.

38. Forest products may also be substituted by non-wood products in end uses and final markets. Although there is increasing anecdotal evidence of this occurring in many consumer markets, particularly in construction and furniture industries, estimating the magnitude or scale of this effect has proven more difficult. However, for specific products this substitution effect may be significant. For example, plywood is believed to face severe competition from solid synthetic panels, with price strongly influencing the choice of a product in the construction industry. In addition, substitution may be more of a problem for wood-based composites, such as particle board, fibreboard and reconstituted panels, and wood pulp.

39. To summarize, empirical studies suggest that substitution between tropical and temperate timber products in importing markets has not been very significant. However, in response to export bans on logs by tropical producers, some importers are increasingly diversifying their sources of supply. Substitution of non-wood products for timber may be occurring, but the evidence is largely anecdotal. Substitution between tropical timber products originating from different countries or regions does appear to be very high, particularly for plywood. This would suggest that importers can substitute between sources of origin with relative ease but also that exporters can easily capture market share through price competition.

40. Thus the available empirical evidence indicates that producer countries as a group may enjoy significant market power. If all producer countries instigate sustainable forest management and this leads to higher prices for timber products across the board, then there may not necessarily be any significant loss of market share. However, if only a few producers instigate sustainable management and this leads to higher prices for their forest products, then substitution away from these products is more likely to occur.

E. Less used species

41. Provided that markets exist, there is substantial potential for expanding utilization of forest resources, particularly in tropical countries, by exploiting commercially less used species. For example, recent FAO statistics suggest that only about 26 per cent of the potential standing volume in tropical harvest areas is being felled. In general, the forest products industry is based on the utilization of large sawlogs and logs for plywood and veneer. In 1988-1992, saw and veneer logs comprised 92 per cent of the total industrial roundwood harvest in Indonesia, 97 per cent for Malaysia and 93 per cent for Papua New Guinea.

42. If the less used species are to play an expanded role in both the temperate and tropical forest products industry, it is unlikely that the additional supply would be suitable for traditional solid wood products such as sawnwood and plywood. Instead, the likely use of the less used species would be for wood pulp and reconstituted wood products such as fibreboard, particle board and reconstituted panels. At least one set of projections, for the Asia-Pacific region, suggests that the potential gains to producers of developing capacity to manufacture composite panel products and other engineered wood products might be substantial and could offset the negative impacts on the forest products industry of declining supplies of forest resources for sawnwood, plywood and veneer.

43. However, there are important considerations for any global strategy to promote the less used species. First, as discussed above, reconstituted wood products and wood pulp are currently some of the most competitive and volatile markets for timber products. Reconstituted wood panels are highly susceptible to substitution in import markets by semi-wood composites, such as cement fibreboard, composites made from agricultural and other recycled wastes, and a variety of non-wood products. Any new form of virgin wood pulp would be competing in terms of quality and price with more traditional sources but also with recycled pulp. As noted above, the problem of market access for any new products generated from the less used species is further exacerbated by the increasing proliferation of environmental, health and other regulations specifying the composition and quality of both reconstituted wood and paper products in consumer markets.

44. Secondly, in many countries, particularly in tropical regions, the potential for identifying - let alone exploiting - the less used species is limited by lack of basic information on the availability and commercial viability of those species. This in turn reflects the limited human and technical resources devoted to inventorying and assessing the forest resource base of the timber industry. Forest resource accounting has been promoted as a means for tropical producer countries to assess their forests regularly, including the identification of the less used species for potential commercial exploitation through sustainable forest management. Basic assessment of this kind is essential if the less used species are to be utilized more in the forest products industry. In addition, further analysis of market demand and the costs of exploitation and utilization is required to determine the commercial viability of these species.

III. CERTIFICATION AND LABELLING

45. The number of eco-labelling and certification initiatives applied to trade in forest products has increased rapidly in recent years. As noted in the section above, there is considerable concern among producer countries and forest-based industries that certification and labelling will be used as non-tariff barriers limiting access to key import markets. If such regulations and schemes are non-discriminatory, transparent and justified, are agreed mutually between trading partners or through multilateral negotiations, comply with GATT rules and conform with internationally recognized guidelines, their potential use as trade barriers will be drastically reduced.

A. Certification of forest products

46. Certification is strongly related to criteria and indicators. 4/ The term "certification" has been used indiscriminately to cover a wide range of processes. In the present report the term, applied to forest products, will be used to mean a process that results in a written statement - i.e., a certificate - attesting to the origin of wood raw material and its status and/or qualifications, often following validation by an independent third party. To be effective in reassuring consumers that wood products originate from sustainably managed sources, certification of forest products requires both certification of the product process and certification of the sustainability of the forest management practices. The latter requires verification of the forest management system in the country of origin, including the environmental and social impacts of forestry practices, against specified sustainable management criteria and standards. The former involves inspection of the entire product processing chain of supply from the forest to final product, through domestic and export markets, if necessary.

47. Proponents of certification argue that it can assist potentially in promoting sustainable forest management while simultaneously reassuring consumers. A properly designed, voluntary and independently accredited certification scheme at the global level can be a means by which the various interested parties can hold producers accountable; it can provide a market-based incentive to the individual producer to improve management; it can meet consumer demands for wood from well-managed forests without creating trade discriminations; and it can be a mechanism for monitoring multiple factors involved in forest use.

48. However, others suggest that the evidence for considerable additional demand for certified wood products is unproven and that only in certain small niche markets may customers be willing to pay more for certified timber. In fact, there is concern that the impact of certification on production and distribution costs might reduce the competitiveness of wood products in consumer markets. It is also argued that, although certification requires sustainable forest management as a necessary prerequisite, implementation of sustainable forest management does not require certification to take place. The promotion of certification globally should not either displace or divert resources from ongoing efforts in the major timber-supplying countries to implement national forest policies, regulations and standards in accordance with international and

national commitments to sustainable forest management. Finally, it is argued that the necessary but stringent conditions required for an accredited global certification scheme are bound to have only a limited impact on a small proportion of global timber production and, equally, on the sustainable management of a limited area of forests.

49. Despite the proliferation of certification schemes, the evidence to date suggests that certified timber is currently having only a limited impact on the global market. In 1993, around 1.5 million m^3 of forest products and 35 suppliers were certified. This amounted to less than 0.5 per cent of global trade. Recent estimates indicate that only about 3.5 million m^3 from 5.1 million ha of forests have been certified so far. In fact, certified production accounts for only 0.23 per cent of the world's industrial roundwood production. It is unlikely that the supply of certified timber and timber products will expand very fast. Even under optimistic projections, only 15 per cent of traded wood products are expected to be affected by certification by the year 1999.

50. Nevertheless, from recent experience with certification of forest products, it is possible to obtain a better idea of the benefits and costs involved. First, certified timber sales in export markets are expected to attract a "green premium" in consumer markets; that is, certified timber could be sold at a higher price than uncertified timber. Secondly, in the absence of certification, some forest products may lose substantial market share in those consumer markets of importing countries that are currently developing legislated or voluntary schemes and even quantitative restrictions and environmental regulations on imports, which will ultimately affect non-certified timber products. Thus one of the additional benefits of certification is that it will allow timber exporters to avoid losses of market share and revenues.

51. An attempt to estimate these benefits for tropical timber certification was made by the World Bank. 5/ A key assumption of the analysis was that certification of tropical timber products would attract a green premium of 10 per cent in certain niche markets in North America and Europe. This leads to a gain of $62 million. On the other hand, in the absence of certification, those markets would be lost to uncertified tropical timber products, although some of the loss could be recouped from diversion of the exports to non-European/North American markets. Thus the avoidance of net revenue losses without certification amounts to $366 million. The total gain from certification of tropical timber products is $428 million, or 4 per cent of the current timber product exports of developing countries. An interesting aspect of this estimate is that the vast majority of the gains from certification arise from avoiding losses in markets and revenues in the absence of certification and not from the additional gains of any "green premium" - despite the generous assumption that the latter might be as high as 10 per cent and with no substitution effects.

52. Such an estimate is of course not without controversy. Although there is now some evidence from surveys that there is willingness to pay a higher price for certified products in certain importing markets, the actual size of such a premium is debatable. More importantly, the higher the premium and thus final product price, the more likely it is that competing non-wood and domestic wood-

based products might be substituted. The estimated gains do not take into account such substitution effects in importing markets.

53. In addition, there is considerable debate about the size of the niche markets ultimately affected by certification. The analysis indicates that, in the absence of tropical timber certification, the markets affected would result in a revenue loss of around 6 per cent of developing country export markets. However, this would affect only 0.64 per cent of the global trade in forest products. Some have suggested that if both tropical and timber products were certified, more markets would certainly be affected, and as a result around 15-25 per cent of the total share of global forest trade could be influenced by certification. However, it is not clear on what basis the latter estimates are made. The ultimate impact on revenues and markets is also not clear. As certification is extended to more temperate, boreal and tropical products, then the "green premium" differential between certified and non-certified wood products will be substantially smaller and may eventually disappear. However, if global certification results in higher prices for wood products generally in consumer markets, then there may be a problem of substitution by non-wood alternatives on a large scale.

54. The issue as to whether certification of forest products inevitably leads to higher prices for forest products in final consumer markets is also controversial and relates to the evidence concerning the overall costs of certification. It is useful to distinguish two costs: the direct costs of certification in terms of implementing such schemes, and the indirect costs of certification through any trade losses and diversion in final consumer markets as a result of substitution between certified and non-certified products.

55. The direct costs of certification include both the costs of assessing or auditing forest management practices in the country of origin and the costs of identifying, monitoring and assessing the entire processing chain of supply from the forest to final products. These costs will clearly vary, depending on the type and size of forest being certified, the type of final product being produced, and the location of processing activities and their degree of vertical integration, both domestically and internationally. For example, for tropical products the costs of assessing or auditing have been estimated at about $0.3-1.0 per ha per year in developing countries, and the costs of certifying the chain of supply for processing could be up to 1 per cent of border prices. For temperate and boreal products in developed countries, cost estimates for certifying forests are roughly similar - $0.3-0.6 per ha. It was suggested that as a rough approximation, the minimum costs of certifying forest management would be a fixed assessment cost of $500 plus $0.40 per ha for the initial assessment and $0.15 per ha for each subsequent visit.

56. Many analysts suggest that an additional direct cost of certification is the incremental cost of improving current forest management practices to satisfy the criteria and standards specified. These costs are likely to be considerably higher than the costs of the certification process itself. For example, it is estimated that, to meet established certification criteria, forest management costs in North American temperate and boreal forests will rise by 20-30 per cent, and might rise as much as 100 per cent. Many of these costs are assumed to result from reduced timber yields and higher operating costs,

although the latter could actually be reduced by better planning, improved residual stands, and reduced-impact harvesting techniques.

57. However, to the extent that the costs of improved forest management are really connected to a transition to sustainable forest practices management and not to certification per se, then it is not completely accurate to attribute all those additional costs to certification. From the perspective of global policies to encourage sustainable forest management, it is probably best to turn this viewpoint around: the costs of assessing and auditing forests and the processing chain of supply from forest to final products are the additional direct costs of certifying sustainably produced timber, on top of the costs of transforming existing forest practices into sustainable practices.

58. There may also be indirect costs of certification as a result of higher prices for certified products in import markets. As discussed above, these costs are related to the size of price differentials for certified products, substitution effects, and the extent of products and markets affected. So far, the available evidence suggests that the number of wood products and markets affected by certification will remain fairly small for the foreseeable future. Moreover, higher sustainable forestry costs plus any additional certification costs in the country of origin may not necessarily translate into substantially higher final product prices in importing markets. On the other hand, the analysis of the impacts of Uruguay Round tariff reductions suggests that only minor changes in prices for wood products in import markets are required for trade creation (or loss) and diversion to occur. Thus there are likely to be some trade losses and diversion for certified timber products in importing markets, although the precise magnitude of those indirect costs of certification is difficult to determine at present.

59. Finally, and most importantly, there is now an emerging international consensus that an international framework is needed, both to ensure harmonization and mutual recognition of certification systems and to guarantee an effective international accreditation of certification bodies. The most important criteria for any internationally accredited certification body are that it be independent, impartial, and able to demonstrate that its organization and personnel are free from any commercial, financial or other pressure. Equally, to achieve harmonization and mutual recognition, a voluntary international certification system must:

(a) Be comprehensive and cover all types of forests and wood products;

(b) Be based on objective and measurable criteria;

(c) Produce reliable assessment results and thus be fully independent from any vested interests;

(d) Be transparent and involve a balanced participation of the interested parties and stakeholders, thereby ensuring their commitment;

(e) Represent all involved parties;

(f) Be goal-oriented and cost-effective.

60. Establishment of such an international framework covering all existing and proposed forest product certification schemes is clearly a long-term process. The Intergovernmental Panel on Forests may wish to endorse this process and encourage the parallel and cooperative development of existing and proposed international schemes, as well as national and regional schemes, with the overall objective of achieving international harmonization and mutual recognition of standards. In addition, IPF may wish to express support for WTO's efforts to ensure that existing and new certification and eco-labelling schemes for forest products are not used in a discriminatory way as a form of disguised protectionism. The purpose of certification of forest products should be to reinforce the positive incentives for sustainable forest management and not to penalize or restrict production and trade in timber not meeting standards.

B. Country certification

61. Given the proliferation of certification schemes and the increasing threat to wood products of being targeted for quantitative restrictions and other market barriers in major consumer markets, the need to develop internationally agreed, accredited and transparent timber certification rules is important. However, it is important to emphasize that timber certification is currently influencing only a very small proportion of the global trade in forest products and an equally limited area of the world's production forests. Even under very optimistic scenarios for the expansion of certification schemes, this is unlikely to change in the foreseeable future. Thus timber certification cannot be considered the main instrument for promoting sustainable forest management globally; in fact, given the pressing needs to promote sustainable forest management, it is imperative to develop urgently other instruments complementary to timber certification which are more directly aimed at wholesale improvements in forestry management policies and regulations in producer countries.

62. One such approach is the concept of country certification. Originally proposed in a report to ITTO, country certification involves certifying through explicit bilateral or multilateral recognition all timber products from a country that can prove it is complying with an internationally agreed objective, such as a sustainable forest management target. Such a scheme could be enacted for all timber producer and consumer countries through an international agreement on all types of forests.

63. The main purpose of country certification is to ensure an international commitment by both producer and consumer countries to adopt policies and practices that encourage sustainable management of production forests and timber products while simultaneously improving international market access of those products. The overall objective is to tackle the two major obstacles to sustainable forest management identified in the present document: restrictions on market access, and forest-sector policy failures. Country certification would also assist with the problem of market transparency. To be effective, country certification would require two broad sets of policy commitments from timber-producing and timber-consuming countries.

64. The first set of policies would require producer countries to review their forest-sector policies and regulations in order to determine the implications of those policies and regulations on timber-related deforestation and the extent to which their timber export policies might also be affecting deforestation, either directly or by exacerbating problems caused by poor domestic forestry policies and regulations. Producer countries ought to correct the policy distortions that work against sustainable timber production objectives, since such distortions are believed to be at the heart of inefficient and unsustainable forest-sector development and timber-related deforestation.

65. The second set of policies would require a commitment by consumer countries to remove any remaining tariff and non-tariff barriers to timber imports into domestic markets, particularly for those producer countries that demonstrate a commitment to forest-sector policy reform. For example, the removal of specific tariff and non-tariff barriers on imports of forest products could proceed on a case-by-case basis, depending on demonstrable progress by each exporting country in promoting sustainable forest management policies and forest-sector policy reform. This could occur through normal bilateral trade negotiations or through multilateral agreements and organizations. In addition, consumer countries should actively promote, through information and market intelligence campaigns, the use of tropical timber imports from exporting countries that are implementing sustainable management policies. Finally, consumer countries should also undertake not to resort to the use of any of the new barriers, identified above, to imports from participating producer countries.

66. With its emphasis on policy reform, country certification is not necessarily an alternative to certification of forest products but complementary to it. The widespread adoption of practices supportive of sustainable forest management in producer countries would make it much easier for more forests and timber products to qualify for timber certification. The global impact of existing timber certification schemes and their coverage of forests and products would likely increase. Moreover, implementation of a global country certification process could initiate increased cooperation between producer countries, consumer countries, timber traders and independent monitors to develop more internationally recognized, transparent and detailed criteria for establishing and evaluating forest management practices globally. Since it may be easier to negotiate and implement, country certification may not only lay the groundwork for more comprehensive international forest product certification agreements but also buy time, by initiating immediate incentives for action on sustainable forest management while the details of more complicated agreements on certification for all global forest products from natural and plantation forests are concluded.

67. As with timber certification, any country certification scheme needs to be voluntary and internationally agreed. If poorly implemented without sufficient international transparency, recognition or commitment, a country certification scheme would have little impact on improving sustainable forest management globally. It would neither take advantage of the trade-related incentives needed for encouraging the sustainable management of forests nor provide a stimulus for fostering further cooperation in related areas, such as certification of forest products. A country certification process that encourages further cooperation by major tropical timber-exporting countries

while at the same time being sufficiently comprehensive to cover major temperate and boreal producers as well would be an important undertaking. However, where technical and financial constraints limit the ability of some poorer tropical producers to implement forest resource assessments, management regulations and policy reforms, additional financial assistance may be required.

IV. FULL COST INTERNALIZATION

68. Inadequate and often distortionary public policies are a major barrier to sustainable forest management in producer countries. The result is inappropriate economic incentives at the stand level which lead to inefficiencies in timber harvesting and create the conditions for short-term extraction for immediate gain, while at the same time failing to "internalize" the direct and indirect environmental impacts of forestry operations. Improper policies also have a more long-term and wide-scale effect on the pattern of forest-based industrialization and its implications for the management of the forest resource base as a whole, including the conversion of forest land to agriculture and other uses. Thus policy reform to improve sustainable forest management may not only reduce the direct and indirect environmental impacts of forestry operations but may also be justified on economic efficiency grounds for long-term development of the forestry industry and the use of forest resources. The result is that, although producer countries may incur significant short-term costs by supporting policy reforms and regulations that encourage sustainable forest management, they are also likely to gain substantially in the long run from a more efficient forestry sector. Even in the short run, the reduction in subsidies, preferential tax breaks and other inducements may be an additional financial benefit of policy reform.

69. The transition to sustainable forest management may impose additional costs at the stand level for residual stand management and increased environmental protection. The increased costs may be attributed to five different factors: the setting aside of certain areas; lower harvesting yields; additional silvicultural and harvesting costs; additional costs of planning, and monitoring; and a different distribution of costs and benefits over time. Low-intensity harvesting will generally mean less timber extracted per hectare in the short term. However, these costs can be at least partially offset by improved harvesting techniques and better planning which lower operating costs. In addition, the current income foregone with reduced yields initially may be more than compensated for over the long run by improved stand productivity and yields as a result of reduced residual damage and better stand regeneration and recovery. Too often, assessment of the costs of sustainable forest management focuses on the short-term costs of implementing improved management and fails to take into account the potential long-term gains in stand productivity and income.

70. Estimating the additional costs - to timber operations at the stand level and forestry industries at the national level - of implementing sustainable forest management practices is therefore extremely difficult. However, the available evidence does suggest that, on the whole:

(a) The transition to sustainable forest management is likely to impose some increase in production costs in the short term, both at the industry level and the stand level;

(b) The additional costs may be higher for tropical than for temperate countries;

(c) It may no longer be economically worthwhile to harvest certain forests, and large areas of the forest resource base in certain countries may have to be "set aside", or taken out of production, which could result in some income losses;

(d) Increases in costs and stumpage prices at the stand level do not necessarily mean significantly higher prices for final forest products.

71. Several studies have found that the costs of implementing sustainable forest management are likely to vary significantly across forests, countries and regions. It was estimated that 5-50 per cent additional production cost is possible. For temperate and boreal forests, the available estimates suggest generally an increase of around 20-30 per cent in costs. For tropical countries, the variation in estimates is much wider but, on average, higher than for temperate regions. Most estimates suggest that the cost of sustainable forest management per cubic metre of log produced is 10-20 per cent of the current average international tropical log price, of about $350.

72. The higher costs of sustainable forest management on overall timber production are likely to make it unfeasible to harvest certain forest areas that would have otherwise been logged. This makes perfect sense in cases where the failure to "internalize" the environmental and long-run costs of timber operations has meant that those operations have remained financially profitable even though they are socially inefficient. A comparison of the private and social returns on selective logging on steep (30 per cent-50 per cent) slope of old-growth forest in the Philippines illustrates this point. The magnitude of the estimated damage to downstream activities indicates that the Philippines would be better off not harvesting old-growth forests on such steep slopes, even though the private concessionaire would gain financially from unsustainable harvesting on the steep terrain.

73. On the other hand, the widespread implementation of sustainable forest management across many regions in a country could result in the removal of many forest areas from potential production. Although there would no doubt be substantial environmental gains, the economic costs to producer countries could be significant, particularly for tropical timber-exporting countries. A recent policy simulation which examined the impact on tropical forest countries of setting aside 10 per cent of their forest resource base concluded that such a reduction in supply would result in a loss of wealth for the countries. Over the long run, taking areas permanently out of production would mean that the remaining production forest inventory could not support as high a level of sustainable harvest as under base-case projections.

74. Finally, it is sometimes argued that the higher additional costs of sustainable forest management will make many timber products uncompetitive in

final markets. However, although harvesting costs are often a large proportion of the stumpage value of logs, for most processed forest products the costs of the wood raw material is a small proportion of the total cost of harvesting. This is particularly the case for products traded globally. For example, typical stumpage values in tropical countries of $6-30 per cubic metre of log equivalent end product often represent less than 1 per cent of the final value of the product being sold in foreign consumer markets. As a consequence, even reasonably large increases in harvesting costs and the stumpage value of timber can have only a modest impact on the final product price in consumer markets. Thus the evidence for both traded tropical, boreal and temperate wood products suggests that a doubling of harvesting costs may lead to an increase of 10-15 per cent in the costs at the importer or wholesaler level and less than a 10 per cent increase in the retailer's costs.

75. A model of Indonesia's forestry sector was developed to simulate a policy initiative for implementing sustainable management of its remaining production forests. Scenarios depicting 25 per cent and 50 per cent increases in harvesting costs across the forestry sector were examined. Although domestic log prices were affected significantly by increased harvest costs, any resulting impact on the rest of Indonesia's forestry sector seemed to be somewhat dissipated. Indonesia's sawnwood and plywood exports seemed to be the least affected by the increased harvest costs, which would suggest that factors of external demand exerted an important counteracting influence.

V. MARKET TRANSPARENCY

76. Improved market transparency is a key element in progress in the reduction of trade barriers to market access; international harmonization and mutual recognition of standards on timber certification; and policy reform and full-cost internalization to promote sustainable forest management. Without greater market transparency, progress in all of these areas is likely to be hampered.

77. As was suggested above, one potential threat to trade in forest products is the development of new non-tariff trade barriers, such as export restrictions set by developing countries, environmental and trade restrictions set in developed countries on production and exports, and quantitative restrictions on imports of "unsustainably produced" timber products. Another threat is the potential use of certification of forest products as an import barrier. Finally, the lack of detailed information on the distribution of costs and rents in the global trade in forest products makes it difficult to assess accurately the likely economic impacts of sustainable forest management and any loss of consumer markets.

78. This suggests that progress in developing trade-related incentives for sustainable forest management globally would benefit from improvements in market transparency in the following ways:

(a) Countries importing forest products should routinely review and make publicly available information on domestic standards and regulations - environmental, health, building etc. - that are likely to affect the import of forest products and patterns of international trade generally. Where such

regulations are considered a legitimate means by the importing country of restricting access to its domestic market on environmental or health grounds, then the information should not only be made publicly available but also periodically assessed by an appropriate international authority, such as WTO;

(b) Countries that use export restrictions to promote value-added processing should also routinely review and make available detailed information on such policies. The policies should also be periodically reviewed and assessed by an appropriate international body, such as WTO. The trade policy review in WTO provides opportunities to do this;

(c) International harmonization and mutual recognition of standards on certification of forest products will require detailed information on both forest management practices globally and the process chain of supply from the forest stand in producer countries to final products in consumer countries for the wide variety of forest products traded internationally. Although some of this information can be gained from end use studies directed at the final consumer and from assessments of forest-level harvesting practices, more information needs to be supplied by intermediate processors, exporters, importers and wood-based manufacturers on which improved international standards on certification of forest products can be developed;

(d) The country certification process, advocated as a complementary approach to the development of internationally agreed standards for voluntary timber certification, is one form of providing periodic reviews and assessment and improved information on producer and consumer country policies affecting the trade in forest products and sustainable forest management;

(e) Assessments of the cost of implementing sustainable forest management in producer countries and of its long-term impact on patterns of forest-based industries in those countries, use of the forest resource base, the returns to different harvesting systems and the competitiveness of forest products in consumer markets will require that more market information be made available by producing countries, consumer countries and industry sources. Again, cooperation in providing this information may be more forthcoming if such assessments are officially sanctioned through an internationally agreed process, such as country certification;

(f) Improved market intelligence for forest products is also required generally, since such intelligence is lacking for most wood-based products. Both consumers and producers would benefit from better market intelligence, which would lead to more competitive and efficient markets;

(g) Finally, as will be discussed below, improved information on markets and revenues is required in order to assess the additional financial assistance that may be needed by low-income producer countries if they are to adopt sustainable forest management and the most efficient and equitable international mechanism for providing that assistance.

VI. CONCLUSIONS AND PROPOSALS FOR ACTION

A. Market access

79. The Uruguay Round Agreement made significant progress in improving market access for forest products, especially in terms of reducing tariffs for all types of forest products. Yet there are still international trade barriers in forest products, particularly new non-tariff barriers, which will hamper better access of forest products to the international market.

1. Proposals for action

80. IPF may wish to:

(a) Support efforts by the World Trade Organization further to reduce tariff and non-tariff barriers to trade in forest products;

(b) Bring to the attention of WTO the proliferation of new barriers to trade in forest products;

(c) Urge developed countries and international organizations such as ITTO, the United Nations Conference on Trade and Development (UNCTAD) and FAO to support efforts by developing countries to increase their productivity and efficiency in downstream processing activities.

81. The competition between different wood products, products from different regions of origin, and wood and non-wood is inevitable. Available evidence suggests that such competition, although unlikely to unduly constrain a global initiative to improve sustainable forest management, would have serious implications to future markets of specific forest products.

2. Proposal for action

82. IPF may wish to propose that UNCTAD and ITTO support efforts to gather information and conduct more independent market and economic studies of potential competition between different wood products, products from different regions of origin, and wood and non-wood substitutes, analysing in particular the likely substitution effects of any increases in the prices of forest products accompanying a global initiative to improve sustainable forest management.

B. Less used species

83. Although there have been many efforts and initiatives by international institutions and producer countries to promote less used species in the international market, progress is still very limited. Concerns have been expressed as to the potential environmental impact on forests of increased exploitation of less used species. It is important, therefore, while intensifying efforts to promote less used species, to address concerns on the potential impact of their exploitation on forests.

Proposals for action

84. IPF may wish to:

(a) Propose that ITTO continue to promote less used species in the international market;

(b) Urge producer countries to ensure that any policy for exploiting less used species and increasing the volume of timber removed from stands is compatible and consistent with improvements in the overall sustainable management of production forests.

C. Certification

85. The long-term process of developing an internationally agreed and voluntary system of certification for forest products is currently being hampered by a proliferation of schemes. There is need to achieve international harmonization and mutual recognition of standards and to encourage cooperation and common agreement among competing international accrediting schemes. In fact, the current international attention paid to certification of forest products needs to be put into perspective. To date, only a tiny proportion of the global trade in forest products and a small area of the world's forests are influenced by certification. In addition, international efforts should ensure that existing and new certification and eco-labelling schemes for forest products are not used in a discriminatory way as a form of disguised protectionism.

Proposals for action

86. IPF may wish to:

(a) Propose that ITTO and UNCTAD provide leadership in bringing the current emphasis on certification into perspective and promote international harmonization and mutual recognition of standards among various certification schemes;

(b) Bring to the attention of the World Trade Organization the need to ensure that existing and new certification and eco-labelling schemes for forest products in importing and consumer markets are not used in a discriminatory way, as a form of disguised protectionism;

(c) Propose that agencies dealing with trade in forest products, such as ITTO, UNCTAD, WTO and FAO, form a working group to consider the formulation of procedures for country certification schemes.

D. Full cost internalization

87. The transition to sustainable forest management is likely to impose significant costs on timber operations and forest industries in boreal, temperate and tropical regions. The burden may be more for tropical countries since they are likely to face higher production and harvesting costs than

temperate countries. There is still uncertainty on the long-term economic implications, in particular the possibilities of losses in forestry income and export earnings.

Proposal for action

88. IPF may wish to support efforts by ITTO, UNCTAD, the European Union and other international institutions to carry out more independent market and economic analyses of the potential additional stand-level and industry-wide costs resulting from a transition to sustainable forestry management and from policy reforms. Such analyses should also examine the potential long-term benefits of improved efficiency and sustainability at all levels of the forestry industry and the development and coordination of international efforts for improved market intelligence.

E. Market transparency

89. Despite some ongoing efforts by ITTO, ITC and FAO, there has been little progress in improving market transparency for trade in forest products. Without greater market transparency, progress in the areas discussed in the present report is likely to be hampered.

Proposal for action

90. IPF may wish to call upon ITTO, FAO and ITC to expand their work on market transparency and provide leadership in establishing a global database, drawing upon expertise and information from relevant agencies and national institutions, to improve market transparency for trade in forest products.

Notes

1/ Official Records of the Economic and Social Council, 1995, Supplement No. 12 (E/1995/32), chap I, sect. D.5, annex I, sect. III (IV).

2/ Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, vol. I, Resolutions Adopted by the Conference (United Nations publication, Sales No. E.93.I.8 and corrigenda), resolution 1, annex III.

3/ For example, London Environmental Economics Centre, The Economic Linkages between the International Trade in Tropical Timber and the Sustainable Management of Tropical Forests (London, LEEC, 1993).

4/ See the report of the Secretary-General on programme element III.2, Criteria and indicators for sustainable forest management (E/CN.17/IPF/1996/10).

5/ P. N. Varangis, R. Crossley and C. A. Primo Braga, "Is there a commercial case for tropical timber certification?" Policy Research Working Paper, No. 1,479 (Washington, D.C., World Bank, 1995).